Preliminary Close Out Report

Atlas Tack Corporation Superfund Site
Fairhaven, Massachusetts

I. Introduction

This Preliminary Close Out Report (PCOR) documents that the U.S. Environmental Protection Agency (EPA) has completed all construction activities for the Atlas Tack Corporation Superfund Site (site) in accordance with the *Close Out Procedures for National Priorities List Sites* (OSWER Directive 9230.2-09A-P, dated January 3, 2000). The source control remedial cleanup activities were conducted in three phases over the course of two years and four months (June 2005 – September 2007). Phase I, initiated in June 2005, included: building demolition and excavation and off-site disposal of building debris, contaminated debris, soil and sludge found in the 10 acre Commercial Area of the site (See Figure 1 below). This phase was completed in March 2006. Phase II was initiated that same month and included excavation and off-site disposal of contaminated soil and debris in the Solid Waste and Disposal Area. This phase was completed in November 2006. Phase III, initiated in January 2007 and completed in September 2007, and included the excavation and disposal of contaminated marsh soil and creek bed sediment, reconstruction of the marsh and creek and restoration of the entire site. All components of the remedy constructed at the site were performed in accordance with EPA-approved plans and specifications. No additional EPA construction is anticipated at the site. The Massachusetts Department of Environmental Protection (MA DEP) is currently working with the owner to close out an existing 100,000 gallon # 6 petroleum fuel oil underground storage tank. Long term groundwater monitoring through monitored natural attenuation (MNA) began at the start of Phase II and will be conducted until interim ecological clean up goals are attained.

II. Summary of Site Conditions

Background

The roughly 48-acre site is located at 83 Pleasant Street in Fairhaven, Massachusetts, approximately one-half mile from Fairhaven Center. The site's surrounding area is predominantly residential. It is bounded by a bike path, residences, and a few commercial/light industrial businesses to the north, a tidal marsh to the east and south, an elementary school about 200 feet to the northwest, and residences immediately to the south. A hurricane dike, built in the early 1960s, runs northeasterly through the marsh area of the site. Approximately 7,200 people live within one mile of the site, and approximately 15,000 live within three miles.

This Site's CERCLIS identification number is MAD001026319. EPA is the lead entity at this Site. The site includes the entire Atlas Tack property (currently owned by Atlas Tack Corporation), unimproved property adjacent to the Atlas Tack facility owned by the Hathaway-Braley Wharf Co. (Hathaway-Braley), and portions of Boys Creek and the adjacent saltwater

tidal marsh extending to Buzzards Bay. The Marsh and creek parcels located south of the dike are owned by Atlas Tack, the Town of Fairhaven and the Commonwealth Electric Company.

The Atlas Tack facility was built in 1901 and historically manufactured wire tacks, steel nails, rivets, bolts, shoe eyelets and similar items. The facility operated electroplating, acid-washing, enameling, and painting processes until 1985. Process wastes containing acids, metals and solvents were discharged into drains in the floor of the main building, into Boys Creek marsh, and into an on-site lagoon. The lagoon effluent discharged to the salt marsh and Boys Creek. This approximately 10,000 square foot unlined surface impoundment contained more than 350,000 gallons of hazardous liquid waste and sludge prior to closure of the facility. The lagoon was partially remediated in 1985 by Atlas Tack under the direction of MA DEP.

Chemicals also permeated the floors and timbers of buildings and migrated to adjacent soil and groundwater. Industrial fill was deposited on top of the original marsh surface to the east of the Atlas Tack buildings. The 3.2 acre portion of a 6.2 acre parcel of property owned by Hathaway-Braley on Church Street, about 500 feet southeast of the main Atlas Tack building, also received waste from a number of sources. The major contaminants of concern at the site include heavy metals, including arsenic, antimony, lead, copper, chromium, zinc, nickel and cadmium; volatile organic compounds; semi-volatiles organic compounds, mainly polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs); cyanide; and pesticides. Soil, surface water, sediment and groundwater have been impacted.

In February 1990, the site was place on the National Priorities List making it eligible for federal funding for investigation and cleanup. The Remedial Investigation/ Feasibility Study (RI/FS) was completed in 1998. The Record of Decision (ROD) was signed in March 2000.

For the purposes of the investigation and remedy selection, the site was divided into the Commercial Area; the Solid Waste and Debris Area (SWDA), which includes the former lagoon and fills areas; the Marsh and Creek Bed Areas, and the Groundwater.

Groundwater beneath and in the vicinity of the site is contaminated, and concentrations of several contaminants of concern exceed Maximum Contaminant Levels (MCLs). While the groundwater is not used as a drinking water supply, it is a conduit for migration of contaminants from the source areas into the marsh, Boys Creek and eventually Buzzards Bay. Attainment of MCLs is not an ARAR. Interim groundwater cleanup goals are ecologically based.

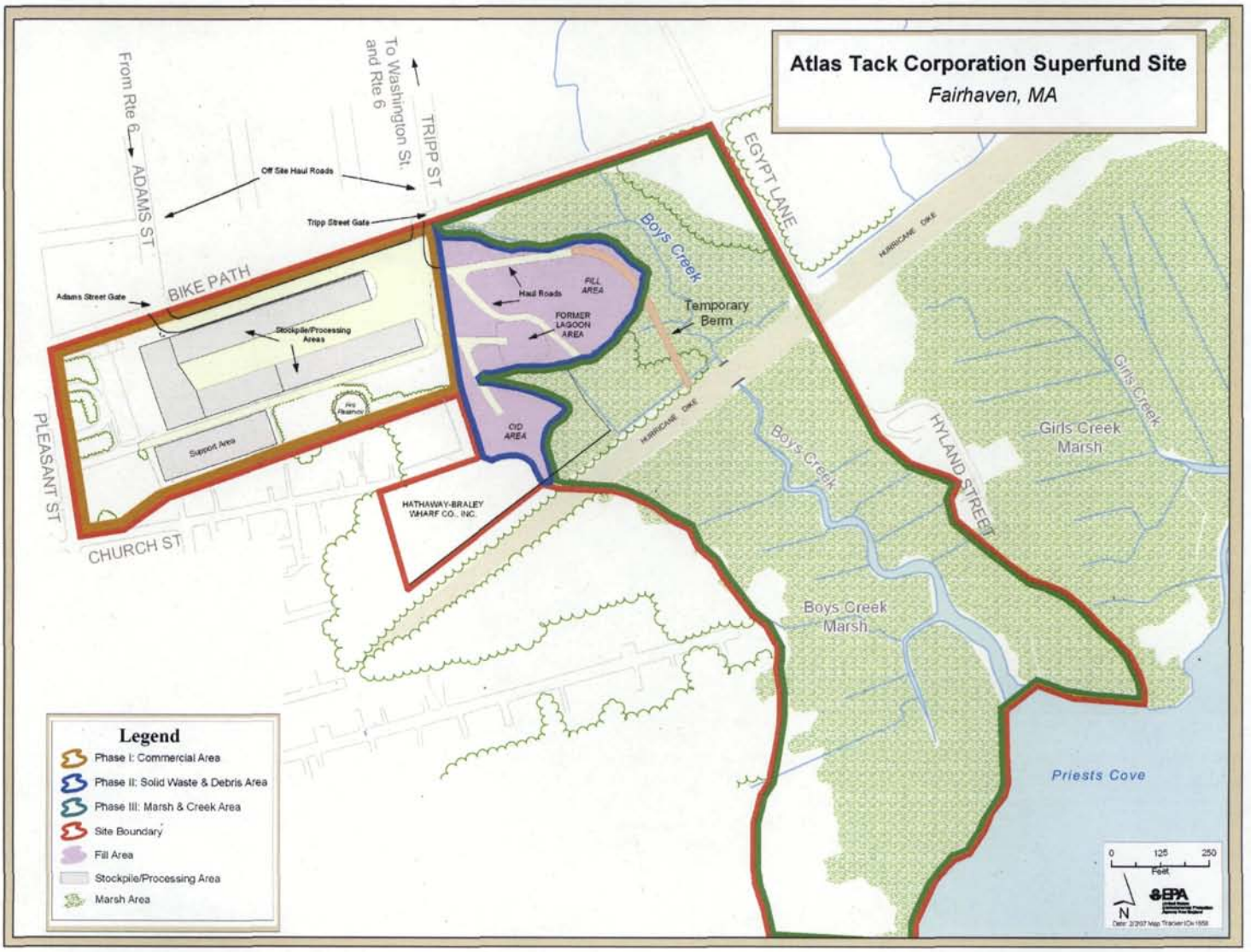
Given the anticipated future use of the site: commercial/industrial use, worker exposure to contaminated soil in the Commercial Area is considered the principal human health threat at the site. Human health risks are also posed by ingestion of contaminated shellfish from Boys Creek. Ecological threats include substantial risk from exposure to contaminated soil and sediment by invertebrates, fish and wildlife such as the meadow vole, black duck and blue heron through direct contact and dietary exposure.

Remedial Construction Activities

The U.S. Army Corps of Engineers (USACE), through an Interagency Agreement (IAG), provided EPA with construction management services and technical oversight of pre-placed

remedial action contracts for this fund-lead site. Charter Environmental, Inc. (Charter), a small business contractor was selected to perform the work in accordance with the performance-based design plans for Phase I. Phases II and III activities were performed through another pre-placed contract utilizing Weston Solutions, Inc (Weston). Weston subcontracted Charter to perform the earth moving construction activities.

FIGURE 1 Site Map



Phase I

The Atlas Tack facility originally consisted of a sprawling single story main manufacturing building (middle portion) that connected a two-story front office building on the west side and a three-story building on the rear (east side). Additionally, a separate power plant building, which contained a laboratory, and several ancillary out buildings were also located in the Commercial Area. The middle portion of the main manufacturing building was demolished by court order in 1998. The foundation slab and underground trenches and pits remained however.

Phase I included the demolition of the three-story portion (68,000 square feet (sf)), the power plant building (approx. 15,000 sf), the concrete slabs beneath these buildings and the existing slab under the previously demolished one story portion of the main manufacturing building (total slab areas approx. 215,000 sf); excavation and off-site disposal of contaminated soil and sludge beneath the buildings, slabs and other portions of the Commercial Area to appropriate disposal facilities. A 185 ft high smoke stack with a 20 ft diameter base located adjacent to the boiler building was also demolished. Prior to demolition, a hazardous materials survey was conducted to identify and remove hazardous materials within and around the buildings prior to demolition. These materials are identified in Table 1 below.

TABLE 1

Hazardous Material Quantities Identified and Removed

Three-story Building Hazardous Materials Survey Results		
Material Type	**Location**	**Quantity**
Light ballasts	Throughout	3 x 55 gallon drums
Fluorescent bulbs	Throughout	7 boxes of 4' bulbs
Exotic plating pit #3 sludge	Exotic plating room	Up to 1 cy
Containerized chemicals	2nd floor	1 x 55 paints/stains
	1st floor	1 x 55 gallon corrosive
	1st floor	1 x 55 gallon batteries
	1st floor	1 x 5 gallon compressed gas
Asbestos	Window caulking	204 windows
	Roofing	18,000 sq ft
	Soil and debris mixed	200 tons
Boiler Building Hazardous Materials Survey Results		
Material Type	**Location**	**Quantity**
Light ballasts	Throughout	1x55 gallon drum
Fluorescent bulbs	Throughout	2 boxes of 4' bulbs
Mercury	1st floor/lab	4x6 oz tubes
Pits/trenches/sump	Boiler room	1-2 cy oily waste
Fly ash	Base of stack	50 yards
Containerized chemical	Throughout	1x55 paints
		1x55 batteries
Boiler Building Hazardous Materials Survey Results		
Asbestos	Roofing	Portion of roof
	Gaskets, Sealants, Coatings	Various
	Window caulking	50 windows
Slab Area Hazardous Materials Survey Results		
Material Type	**Location**	**Quantity**
Pit #1 (pickling trench)	Southwest side of slab area	100 yards of sludge/debris
Pit #2 (plating pit)	Southeast side of slab area	675 yards of sludge/debris
Miscellaneous Hazardous Materials Survey Results		
Material Type	**Location**	
100,000 gal Oil tank UST	Next to boiler building	

300,000 water cistern (clean)	Next to boiler building
Plating tubes	Slab
Pipe chase	Under slab
Transformer pad	Southside access road
Coal ash	Side of boiler building
Hydraulic oil	Former loading area

A total of 12,000 cubic yards (cy) of brick and concrete were crushed in order to be used on-site as fill material. This planned use of this crushed material was precluded, however, because sampling and analysis of the material showed elevated levels of PAHs. Accordingly, the material was stockpiled and covered on-site until the summer of 2007 when it was shipped off-site to a recycling facility in Maine (75% of the material) and the remaining to landfill in Worcester, MA.

For each phase of the project, a horizontal grid (125ft by 125 ft) system was overlaid on the site to identify precisely where the material was initially excavated from and where it was subsequently stockpiled. This system, with its unique grid number and exact location (horizontal and depth), allowed the contractor to analyze each stockpile and determine the appropriate disposal facility to send it to. The grid, sampling points and final grades were surveyed during the project using global positioning system (GPS) technology. All areas were surveyed after excavation and after final grading occurred.

A total of 5,480 (cy) of contaminated soil and 775 cubic yards of plating sludge (RCRA listed waste F009) was excavated and disposed of off-site in Phase I (See Table 2 for a list of additional wastes and associated quantities found in the buildings and areas around the buildings). (Note: the ROD estimated 625 cy RCRA listed waste and 25 cy of TSCA (PCB> 50 ppm) would need to be excavated.) No TSCA waste was encountered.

Subsequent to demolition, excavation and off-site disposal of materials, the Commercial Area was backfilled and graded for use as a stockpile and staging area to support Phase II and III activities such as soil processing and storage of soil, debris and sediment prior to off-site disposal (See Figure 1). The area was then decommissioned, graded, topsoil added and hydro-seeded to facilitate proper site drainage.

Phase II – Solid Waste and Disposal Area

Just east of the Commercial Area, the SWDA consists of the Fill Area, the Former Lagoon Area on the Atlas Tack Corporation property and the Commercial and Industrial Debris Area (CID), located on property owned by Hathaway-Braley (See Figure 1). Approximately 36,660 cubic yards of contaminated soil and debris were removed during this phase (see Table 2). The ROD estimated 38,000 cy of material needed excavation.

A minimal quantity of groundwater and rainfall precipitation accumulated in the excavation areas during excavation. When necessary, these areas were dewatered and discharged to upgradient areas that were yet to be remediated. In the case of the last area to be remediated, accumulated water was sampled and analyzed for AWQC parameters and was then allowed to be

discharged to Priest's Cove at the mouth of Boys Creek. Similarly, water from the dewatering pad where natural dewatering of excavated soil occurred was tested for AWQC parameters and discharged to Priest's Cove.

Groundwater monitoring began at the start of Phase II and two rounds have been conducted to date. Several shallow wells were unavoidably destroyed during excavation activities. Eight (8) new groundwater monitoring wells were installed on September 24 through 26, 2007. The siting of these new wells is designed to substitute for the destroyed wells and to adequately monitor natural attenuation.

Most of the fill areas remediated in this phase were originally wetland. As the remedy called for these areas to be restored as wetland, restoration of this area including final grading, occurred in conjunction with marsh restoration activities during Phase III.

Phase III – Boys Creek Marsh and Boys Creek

This final phase of construction consisted of excavation of contaminated marsh soil and creek bed sediment and restoration of the area. The ROD required that a bioavailability study in the Marsh Area be performed to better define the extent of the areas requiring excavation, thereby avoiding, to the extent practicable, the unnecessary destruction of any floodplain, wetland or riverfront area. This study was conducted between 2001 and 2004. Cleanup levels were developed based on the correlation between mainly metals data and associated toxicity data for each sampling location. Based upon an analysis of these results, cleanup levels were established. Areas in the marsh were then delineated for excavation.

The total quantity of marsh and creek bed sediment removed was 36,430 cy (See Table 2 for a further breakdown by area). (Note: the ROD estimate was approximately 16,146 cy which only included the marsh north of the dike and west of the creek.) Results obtained from the bioavailability study determined that excavation north of the dike and east of the creek as well as excavation of portions south of the dike be included. The total amount of marsh soil excavated increased by 20,284 cy. (Note also: approximately 1,100 cy (ROD estimate) creek bed sediment is included in the total figures.)

For the marsh restoration, distinct fresh water and salt water wetlands were constructed adjacent to each other separated by a clay core earthen berm. The excavated and restored areas have been replanted with a variety of native species. The fresh water wetland was designed with steep slopes and a low elevation with standing water to minimize phragmites invasion. Final grading was designed to replicate the elevation contour lines that existed in 1901 (prior to manufacturing activities at the site). A detailed maintenance plan has been prepared for marsh and creek monitoring and maintenance.

The ROD also called for phytoremediation by planting trees to enhance MNA through lowering the groundwater table in the upland areas of the site. The adjacent newly restored freshwater wetland, however, requires as much groundwater as possible from the upland areas. Thus, notwithstanding the possible enhancement benefit to the MNA component of the remedy, EPA determined that lowering the groundwater table would not allow for enough groundwater

flow into the freshwater wetland area and would increase the risk of phragmites invasion. Accordingly, the trees were not planted.

TABLE 2
Contaminated Soil, Sludge and Sediment Quantities (CY)

EXCAVATION SUMMARY	PHASE I	PHASE II				PHASE III	
Areas	Commercial Area	CID	East Fill	Northwest Fill	Lagoon	South of Barrier (SOB)	North of Barrier
Quantity (cy)	6,255	7,112	11,362	10,280	7,906	9,582	26,848
Total Quantity of Materials Excavated per Phase	6,255 cy ROD est. 625 cy	36,660 cy ROD est. 38,289 cy				36,430 cy ROD est. 16,146	
Total Quantity Excavated	79,345 cy 108,129 tons Rod est. 55,085 cy						

III. Demonstration of Cleanup Activity Quality Assurance and Quality Control

RD/RA activities at the Site were consistent with the ROD and EPA RD/RA Statements of Work provided to the Corps. RA plans for all phases of construction included a Quality Assurance Project Plan and incorporated all EPA and State quality assurance and quality control procedures and protocols (where necessary). All procedures and protocol were followed for soil, sediment, water and air sampling during the RA. EPA analytical methods were used for all validation and monitoring samples during all RA activities. EPA has determined that the analytical results are accurate to the degree needed to assure satisfactory execution of the RA and are consistent with the ROD and the RD/RA plans and specifications.

Air monitoring was performed throughout the project within the work zones and at perimeter locations. These monitoring locations were adjusted based upon the wind direction. No exceedences of action levels occurred during the project. Eight-hour Suma canister monitoring was performed at the start of each phase and real time monitoring was performed and recorded continuously during the work day. During the asbestos abatement, real time monitoring was performed and laboratory samples were taken and analyzed at perimeter locations as well as work zone areas.

Several community meetings were held during the RD/RA phases. Weekly and Bi-weekly reports which included a list of site activities and projected activities and results of air monitoring taken at the site perimeter were posted at Town Hall and on EPA's website for the site.

A pre-final inspection was conducted on September 20, 2007. Representatives from EPA, MA DEP, USACE and Weston Solutions, Inc. were present. The following items were identified as not being complete:

1. Receipt of all confirmation sampling results documenting remediation completion (one sample remaining):
2. Transportation and disposal of approximately 1,300 cy soil to disposal facilities;
3. Restoration of portion of culvert bank near Tripp St.;
4. Restoration of the haul road to the box culvert south of dike;
5. Restoration of staging area south of dike;
6. Final application of herbicide to phragmites south of the dike[1];
7. Regrade, topsoil and seed Commercial Area[1];
8. Install eight groundwater monitoring wells (one well is a replacement well accidentally destroyed by contractor which was installed by Atlas Tack in April 2007);
9. Remove truck decontamination pad at Tripp St exit;
10. Install goose fencing over salt marsh plantings[1];
11. Re-erect site perimeter chain link fencing along dike[1];
12. Place boulders along Commercial Area/Solid Waste Debris Area boundary[1];
13. Place excess vegetative brush along fresh water bank for extra protection[1]; and
14. Flush out hurricane dike 48" culvert[1].

Demobilization of trailers and equipment will begin Monday, October 1, 2007.

Items 1, 2, 3, 4, 5 and 8 have been completed. Items 6, 9, 12-14 will be complete COB tomorrow (9/29). Items 7, 10 and 11 (punch list items) will be completed by the October 4, 2007. For item 7, the grading is complete, however, hydro-seeding has been postponed due to predicted precipitation. For Items 10 and 11, also punch list items, additional chain link fencing and the goose fencing are on order for next week. See attached USACE letter from Christopher J. Turek, P.E., Project Engineer to Ms. Elaine Stanley, EPA Remedial Project Manager, dated September 27, 2007, stating that the subject project is substantially complete.

IV. Activities and Schedule for Site Completion

Construction for the site was completed in September 2007. MA DEP is scheduled to begin the O&M for the source control remedy no later than September 2008 when the remedy is determined to be Operational & Functional. EPA will conduct Long Term Remedial Action for the groundwater portion of the remedy until September 2018 or until three consecutive years after the interim groundwater cleanup goals have been observed. EPA has estimated that the groundwater will naturally attenuate to achieve the groundwater quality goals consistent with a viable ecosystem in Boys Creek and the associated marsh areas within 10 years after completion of the source control component. The selected remedy will also provide environmental and ecological benefits through the restoration of a fresh water and estuarine wetland system. If cleanup goals are not attained by 2018, MA DEP will conduct groundwater monitoring until attainment is reached. No further construction is anticipated at the site.

Institutional controls (ICs) will be established on the Site properties to ensure that the remedy is protective of human health and the environment and will include of environmental easements that will run with the land in perpetuity. An IC will be established to prohibit any future use of the groundwater at the site for drinking water. In addition, ICs will be established to restrict excavation

1 Considered a punch list item.

and soil movement within portions of the Commercial Area and limit future use to only certain commercial and industrial uses (i.e., no residential use). Institutional controls may also be established in the Non-Commercial areas to limit the use of that area to certain recreational uses consistent with the risk assessment and response actions conducted in that area. Most of the Non-Commercial areas of the site are wetland; therefore, wetland restrictions shall be applicable. These ICs are being implemented by Atlas Tack, Hathaway-Braley, the Town of Fairhaven, DOJ, EPA and MA DEP. Once in place, the restrictions shall be monitored and enforced by MA DEP.

During construction, site security was maintained with a secured perimeter fence. The fence will be maintained by EPA until EPA has determined that it is no longer needed to ensure the safe conduct of the Remedial Action, secure EPA or its contractors equipment, and activities associated with the Remedial Action. Appropriate government access for remedial response is provided through consent decrees and an access agreement.

The following actions/activities and their proposed completion dates with the goal of final close out of the site are listed in Table 3 below:

TABLE 3

Action/Activity	**Planned Completion Date**	**Responsible Organization**
Implement Institutional Controls	2010	DOJ/EPA/MA DEP
Access Agreements	In place	EPA/MA DEP
Transfer O&M for Source Control Remedy of Site to State	September 2008	EPA/MA DEP
Transfer from LTRA to State O&M	September 2018	EPA/MA DEP
Conduct 1st Five Year Review	June 2010	EPA
Conduct 2nd Five Year Review	June 2015	EPA
Conduct 3rd Five Year Review	June 2020	EPA
Conduct 4th Five Year Review	June 2025	EPA
Conduct 5th Five Year Review	June 2030	EPA
Conduct 6th Five Year Review	June 2035	EPA

Action/Activity	Planned Completion Date	Responsible Organization
Conduct 7th Five Year Review	June 2040	EPA
Complete O&M Activities[2]	September 2040	DEP
Complete Final Closeout Report	September 2040	EPA
Complete RA Report	January 2041	EPA
Propose Site Deletion from NPL	January 2041	EPA
Final Site Deletion from NPL	April 2041	EPA

V. Summary of Remediation Costs

Assuming a 2002 RA start, the ROD estimated in 2000 the present worth cost of the cleanup to be $18.1M (including LTRA and O&M). Total actual RA costs including one year of O&M is $20.6M. It is estimated that LTRA will cost approximately $50,000-$100,000/year and the first five years of O&M to be $50,000/year.

Site design and construction costs are shown in Table 4 below:

TABLE 4

Phase	Description	Design[3]	Construction
Phase I	Commercial Area	----------	$3,117,402
Phase II	Solid Waste and Disposal Area	----------	$8,186,639
Phase III	Marsh and Creek Bed Areas	$489,584	$8,577,942
All Phases	USACE Construction Management		$702,767
	Total Construction Costs		**$20,584,750**
	Total Design and Construction Costs	**$21,074,334**	

2 The O&M date is projected base on the typical 30 year groundwater cleanup time period and is specified in the ROD.

3 The remedial action was constructed using performance-based scopes of work due to the non-complex nature of demolition and excavation type construction. Remedial Design costs were expended for the bioavailability study.

VI. Five-Year Review

Hazardous substances will remain at the site above concentration levels that would allow for unrestricted use and unrestricted exposure after the completion of all remedial actions. Pursuant to CERCLA Section 121(c), NCP Section 300.400(f)(4)(ii) and as provided in OSWER Directive 9355.7-02, Structure and Components of Five-Year Reviews, May 23, 1991 and OSWER Directive 9355.7-02A, Supplemental Five-Year Review Guidance, July 26, 1994 and OSWER Directive 9355.7-03B-P, June 2001, EPA must conduct statutory five-year reviews. The purpose of these reviews is to evaluate whether the selected remedy remains protective of human health and the environment. These five-year reviews are required no less often than each five years after the initiation of the remedial action. EPA may terminate these reviews when no hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unrestricted use and unlimited exposure. The first Five-Year Review will be conducted in June 2010.

James T. Owens III, Director
Office of Site Remediation and Restoration

9.28.07
Date

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
NEW BEDFORD RESIDENT OFFICE
103 Sawyer Street
New Bedford, MA 02746-2448

REPLY TO
ATTENTION OF

September 27, 2007

Subject: Contract No. W912WJ-05-D-0009,
Atlas Tack Superfund Site, Phase II – Remedial Activities,
Fairhaven, Massachusetts
"Pre-Final Inspection – Substantial Completion"

Ms. Elaine Stanley
Remedial Project Manager
Office of Site Restoration and Restoration
USEPA – Region 1
1 Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Dear Ms. Stanley:

This is to document the results of the pre-final inspection of the subject project which was conducted on 9/20/07. Besides you and me, the following were in attendance:
Mr. Robert Cianciarulo – USEPA, Chief, MA Superfund Section
Mr. Ronald Gonzalez – USEPA, Site Attorney
Mr. Joseph P. Coyne – MADEP, Remedial Project Manager
Ms. Heather Sullivan – USACE, Project Manager
Mr. David Abrahamson, Weston Solutions, Inc., Project Manager
Mr. Edwin Benton – Weston Solutions, Inc., Remedial Site Manager
Mr. Ryan Jendrasiak – Weston Solutions, Inc., Site Quality Control Officer
Mr. Andrew Klappholz – Weston Solutions, Inc., Site Geoscientist
Mr. Donald Pipatti – Charter Environmental, Inc., Site Superintendent.

As of that date, the following items were not yet complete:

1) receipt of one data set of confirmation sampling results documenting completion of the lone remaining lead pit area of remediation;
2) T&D of the remaining 1300 CY of waste at licensed facilities;
3) restoration of the creek bed east of Tripp Street (NOB);
4) restoration of haul road to the box culvert location (SOB);
5) restoration of staging area (SOB);
6) final application of herbicide for phragmites eradication;
7) re-grading, topsoiling and seeding of the commercial area;
8) installation of eight monitoring wells;
9) removal of the truck decon pad at the Tripp Street exit gate;

10) installation of the goose fencing over the fresh water wetland plantings;
11) re-erection of the southern section of site perimeter fencing along the hurricane barrier (NOB);
12) placement of boulders along the Commercial Area / Solid Waste Debris Area boundary and atop the western slope of the freshwater wetland;
13) placement of vegetative brush habitation along the western slope of the freshwater wetland; and
14) flushing of the culvert in the hurricane barrier.

Today, a follow-up inspection was conducted. You and I were accompanied by Messrs. Benton and Jendrasiak. The following items were noted:

1) the data set of confirmation sampling results documenting completion of the lone remaining lead pit area of remediation has been received;
2) the last 250 CY of waste will be shipped off-site and received at a licensed facilities by tomorrow;
3) restoration of the creek bed east of Tripp Street (NOB) has been completed;
4) restoration of haul road to the box culvert location (SOB) has been completed;
5) restoration of staging area (SOB) will be completed tomorrow;
6) final application of herbicide for phragmites eradication is scheduled for 9/29;
7) re-grading and topsoiling of the commercial area is approximately 75% complete with the remaining area and all hydroseeding is scheduled to be complete by 10/2 (note that hydroseeding was scheduled for tomorrow but was postponed due to predicted rain);
8) installation of eight monitoring wells has been completed;
9) removal of the truck decon pad at the Tripp Street exit gate is scheduled to be complete by 9/29;
10) installation of the goose fencing over the fresh water wetland plantings is scheduled to be complete by 10/5;
11) re-erection of the southern section of site perimeter fencing along the hurricane barrier (NOB) is scheduled to be complete by 10/4;
12) placement of boulders along the Commercial Area / Solid Waste Debris Area boundary and atop the western slope of the freshwater wetland is scheduled to be complete by 9/29;
13) placement of vegetative brush habitation along the western slope of the freshwater wetland is scheduled to be complete by 9/29; and
14) flushing of the culvert in the hurricane barrier is scheduled to be complete by 9/29.

Based upon the completion of the items noted above, and other items expected to be completed by 9/29, the only items that are considered to be punch list items are the hydroseeding, goose fencing and site perimeter fencing. These punch list items are realistically expected to be completed by the end of the first week of October.

Therefore, it is with great pleasure that I can attest that subject project is considered substantially complete. I hope that you share my opinion that the Weston/Charter team has performed exceptionally well and that this project is considered a great success.

Sincerely,

Christopher J. Turek

Christopher J. Turek, PE
Project Engineer – COR
New Bedford Resident Office

CF: Contracting Div.
Ms. Sullivan
Mr. Cianciarulo, USEPA
Mr. Coyne, MADEP
Mr. Abrahamson, Weston Solutions, Inc.
Mr. Benton, Weston Solutions, Inc.
Mr. Pipatti, Charter Environmental, Inc.
NBRO